

Research Highlights

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Evaluating HIV intensive street outreach with an at-risk population

A recent effort at intensive street outreach to prevent HIV/AIDS among disadvantaged African-American women illustrates how the issues that make this group among the most threatened by HIV also make prevention outreach efforts among them difficult to implement and evaluate.

Disadvantaged Black Women and HIV

Recent statistics about HIV/AIDS show that poor African-American women are among the members of the U.S. society most threatened by HIV/AIDS.

Nationally, the rate of AIDS in African-American women in 1996 was 17 times that of white women. In Virginia, where only 20% of the population is black, African-American women accounted in 1996 for 70% of all cases in women.

Many disadvantaged black women are confronted by a set of basic life support issues that simultaneously *decrease* their ability to adopt HIV/AIDS prevention strategies and *increase* the chance that they will be exposed to the virus.

Largely because of their precarious economic situations, AIDS may be seen as one more risk in a long list of basic survival needs, many of which pose more immediate threat. Drug use by these women or by sex partners increases their risk greatly, as does having multiple sex partners, beginning sexual activity at a young age, and trading sex for money or drugs.

An Intervention and an Evaluation

In late 1994, the Survey and Evaluation Research Laboratory at Virginia Commonwealth University teamed with the Hampton Roads Urban League to implement and evaluate two reasonably controlled models for street outreach to determine (1) which

was more effective with this population and (2) the resources needed to implement them.

The project was conducted on behalf of the Virginia HIV Community Planning Committee (VHCPC) as a pilot study to help plan the implementation of a statewide evaluation system for HIV prevention programs.

Street outreach is a component of almost all comprehensive HIV prevention programs and is extraordinarily difficult to maintain and evaluate. Client contacts are hard to maintain, confidentiality is necessary, outreach workers must work hard to gain acceptance, and data collection can be nearly impossible.

The study confronted these and other difficulties in the implementation of its quasi-experimental design. The process is described below, along with lessons learned that may be of use to others considering such projects.

The Transtheoretical Model of Behavior Change

The transtheoretical model of behavior change¹ has been adopted by the Centers for Disease Control

¹ Prochaska JO, Redding CA, Harlow LL, Rossi JS, Velicer WF: The Transtheoretical Model of Change and HIV Prevention: A Review. *Health Education Quarterly*, Vol.21(4): 471-486 (Winter 1994); Prochaska, JO, Norcross, JC., and DiClemente, CC: *Changing for Good*, New York: Avon, 1994.

Figure 1: Transtheoretical Model of Behavior Change Related to HIV/AIDS Prevention

Stage	Characteristics	Corresponding Interventions
1. Pre-Contemplation	Individual is engaged in risky behaviors and is not at a point of considering change.	Offering risk awareness information, such as the causes and results of HIV/AIDS.
2. Contemplation	Individual is engaged in risky behaviors and considers changing behaviors, but no action toward change has occurred.	Providing one-to-one risk reduction education, such as the need for and use of condoms and/or clean drug paraphernalia.
3. Ready for Action	Individual has decided to reduce risk and has begun, albeit inconsistently, to change behaviors.	Providing one-to-one skills development, such as how to talk to a sex partner about the need for protection.
4. Action	Individual has established intentional and consistent change in risky behaviors.	Providing condoms and/or bleach kits.
5. Maintenance	Individual shows a pattern of risk reduction and the intention to maintain it.	Providing supportive counseling, referral, follow-up.

and Prevention to guide the development and evaluation of HIV/AIDS prevention and education programs. Figure 1 shows a summary of this model.

One key underlying assumption of this model is that individuals are in charge of changing their own lives, and that they pass through the stages in Figure 1 in doing so, often relapsing several times before successfully making and maintaining change.

Another key assumption is that the type of assistance needed is dependent upon the stage an individual is in. Precontemplators and contemplators may need information about how to prevent HIV and the dire consequences of an HIV infection. Individuals in the Ready-for-Action and Action stages would need specific strategies to reduce their risk, such as how to negotiate the use of condoms and instruction in how to use condoms.

Intervening in ways that are inappropriate for the person's current stage in the series may be at best wasteful and at worst harmful. The model calls, therefore, for one-on-one assessment and the implementation of an intervention customized to each individual's place in the series of stages.

Original Study Design

Subsidized housing areas in Norfolk and Portsmouth were chosen as the study sites, because of the high density of residents at risk of HIV infection and previous outreach and data collection there by the Urban League. About 90% of households in these areas were headed by African-American women.

Outreach workers were to contact and complete basic risk assessment with a total of 600-700 individuals, from whom 200 in each site would be recruited for study participation. Norfolk was to be the experimental group, with Portsmouth the comparison site.

A set of intervention strategies based on the transtheoretical model was developed for implementation at the experimental site, to be compared to the Urban League's standard intervention, mostly rooted in traditional programs of providing HIV transmission and avoidance information.

In the experimental site, the design required an initial assessment of participants to determine their current stage in the transtheoretical model. The purpose of the interventions was to facilitate movement from one stage of HIV/AIDS risk awareness and behavior (a stage in the model) to the next stage.

Data were to be collected at five "staging" points, at two-month intervals. Participants were placed in a stage (i.e., "staged") according to their responses to questions about their attitudes, intentions, and behaviors related to HIV/AIDS. Success of the interventions would be judged by movement from a lower to a higher stage in the model.

Data Collection Plan

Outreach workers were to go to the communities at designated times over about one year. During the first visit, they would identify people willing to participate in the study, collect demographic and risk

assessment information and addresses, and describe their plans to return to talk further with them about their HIV/AIDS risk. This would be the transtheoretical model's first "staging" during which participants would be placed in a stage of the behavior-change continuum.

At the experimental site, outreach workers were also to express their intention to return and spend time with participants in further discussions of HIV/AIDS concerns. They were also expected to keep client logs of any interactions conducted between the designated stagings.

Risk assessments were intended to identify a specific target behavior or change (i.e., unprotected sex). This combined with the staging information would indicate the type of intervention needed.

At the comparison site, data would be collected in similar manner, with the exception that no client log data would be collected, since this was not part of the standard street outreach model.

Outreach workers were to contact and complete basic risk assessment with 600-700 individuals, from whom 200 in each site would then be recruited for the study population.

Implementation

After the recruitment and training of outreach workers (necessitating considerable fundraising and commitment of resources by the Urban League) in both the interventions and the data collection protocols, the first effort to recruit participants and do the initial risk assessment and staging began in March 1995. Difficulties began almost immediately:

- Outreach workers needed two months and 600 contacts to recruit 175 participants at the comparison site and 135 at the experimental site. Interventions were delayed until at least 200 participants could be recruited for the experimental site.
- Initial analysis of participant information discovered very high rates of missing and illogical responses. As a result, more training of outreach workers and fine-tuning of the stage interventions were required.
- By this time, too much time had passed since initial data collection to ensure that participants could be located for further stagings and to ensure that the data already gathered would remain accurate. This, combined with staff and organizational changes at the SERL and Urban League and attrition in the outreach staff, re-

quired that in November 1995 the project be put on hold.

- This attrition in the outreach staff left the experimental (Norfolk) site without staff to implement the demanding experimental regimen of intervention and data collection. Therefore, it was decided to switch the two sites so that Portsmouth would become the experimental site.
- Since five months had passed since the initial staging, it was decided to restage the participants, resulting in the study being re-started in February 1996. Again, the data collected at this stage were missing important information, requiring the outreach team to revisit participants. More participants also had to be identified since some had dropped out.
- Interventions were initiated at the experimental site in mid-March after the first staging and were to continue through the end of May, followed by the second staging.
- By July 1996 it had been realized that too few individuals were being staged, some could not be located because their housing units were being renovated and they were temporarily housed elsewhere, and one outreach worker had not been using the accepted protocol for recruiting participants.

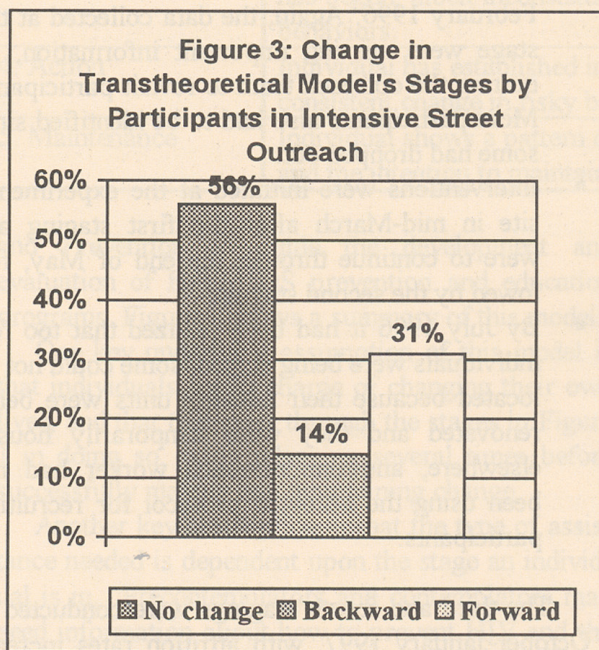
The third and fourth stagings were conducted in October-January 1997, with attrition rates increasing among participants with each wave of data collection. Because of this, the final yield of cases was not as high as had been hoped. Of 200 individuals from whom risk assessment data were obtained in the experimental site (on the second start), only 35% were seen again in the process. For the comparison group, of the 201 the project started with, only 10% continued.

As a result there were 61 participants at the experimental site for whom data were available at multiple points in time and for whom behavior change could be assessed. Only 18 such individuals were available at the comparison site.

Results

The low number of individuals for whom data are available across the entire series of stagings at the comparison site prevented the comparison between that site and the experimental site in terms of effectiveness of the prevention interventions, a major goal of the study.

However, the limited information available from the experimental data indicate that the more intense intervention did seem to increase compliance with safer sex recommendations. Figure 3 shows that while more than half did not change stages, of those who did change, twice as many moved forward (towards positive behavior change) as those who moved backwards. High-risk individuals who received intensive street outreach moved toward a safer stage of risk reduction.



Limitations and Lessons Learned

Significant problems were encountered that raise questions concerning the generalizability of these results and indicate the difficulty of carrying out such field experiments:

- Outreach workers were to a large degree unable to collect and report complete data as required by the project's design.
- Because of organizational and data collection deficiencies, it was often difficult to provide updated staging information to outreach workers. This undermined the implementation of the theory-based intensive intervention at the experimental site.

The lessons to be drawn from the project include the following:

- The organizations sponsoring such projects must understand the level of resources required and be committed to providing them.

- The line between program development and evaluation must be clearly delineated and maintained throughout the project. At times programming has to be enhanced to enable proper implementation of interventions, so that evaluation can proceed. This can lead to confusion about goals among project staff.
- Intervention staff must understand the necessity of an evaluation and how to implement one in conjunction with the intervention. Staff must develop "ownership" of the process.
- The need for the highest quality data must be stressed, while realizing that data collection settings will not be optimal and that data collection should never interfere with service provision.
- Very intensive levels of training will be required relating to the intervention, data collection methods and standards, the theory driving the intervention, and the culture and circumstances of the target group.
- Organizational flexibility must be maintained at all times. Field experiments are always prone to disruption because of the uncontrolled environment in which they are conducted. This may be particularly likely with very high-risk populations. Planners should always keep this in mind when considering time lines, staffing needs and budgets, and expectations for outcomes.

The SERL and the HCPC

The Virginia Commonwealth University Survey and Evaluation Research Laboratory, founded in 1982 and incorporated in the University's Center for Public Policy in 1994, serves the University, the community, and government through some 100 projects annually. The SERL also manages a number of large data sets available through the Inter-university Consortium for Political and Social Research.

The SERL conducted the study discussed in this report for the Virginia HIV Community Planning Committee, an advisory committee to the Virginia Department of Health. The HCPC includes representatives from communities across Virginia most affected by the epidemic and is responsible for developing an annual HIV prevention plan for Virginia for submission to the Centers for Disease Control and Prevention.

For more information about this study, the SERL, or the HCPC, contact: VCU Survey and Evaluation Research Laboratory, PO Box 3016, Richmond, VA 23284-3016, phone (804) 828-8813, fax (804) 828-6133, or on the World Wide Web at <http://www.vcu.edu/srl>.